

# **ITS Field Operational Test Summary**

## **Boston SmarTraveler**

FHWA Contact: Office of Traffic Management and ITS Applications, (202) 366-0372

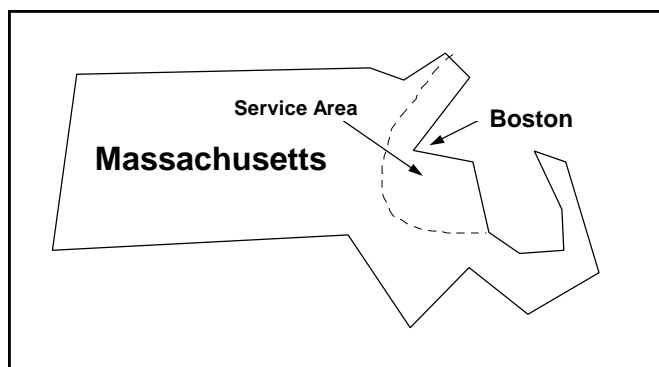
### **Introduction**

The Boston SmarTraveler Advanced Traveler Information System (ATIS) ITS Field Operational Test offered free, real-time, route-specific traffic and public transportation information via telephone to users in the Boston metropolitan area. The test proposed to assess the quantity and quality of information provided by the system, evaluate its public acceptance, and determine its impact on managing traffic congestion.

Phase I began in October 1992 and included a development and implementation period. Phase II began in January 1993 and was extended until March 1994. Phase II tested the operation and user acceptance of the system. Phase III of the project extended service until the end of 1994 to provide more time to operate the system and collect user responses.

### **Project Description**

SmarTraveler operated in eastern Massachusetts, covering the Boston metropolitan area (see Figure 1). Conventional and cellular phone users could dial a number and receive travel information for one or more of 20 monitored highway segments, or for three public transportation services. Available information included traffic conditions, driving times, and anomalies (for example, accidents). The information did not include alternative route information. SmarTraveler used a proprietary audiotext system to store, organize, and disseminate travel information. System operators compiled the audiotext information from several sources, including video cameras, state police sources and probe vehicles. Operators also received information from up to three surveillance aircraft and from the Massachusetts Highway Department. Operators updated the system information continuously. System operators promoted the service through ads on local radio and television stations, promotional messages on variable message signs, media stories, interviews about the service, and distribution of flyers.



**Figure 1: SmarTraveler Service Area**

The evaluation team observed SmarTraveler operations and held discussions with representatives of transportation organizations that interacted with the system. Team members analyzed data

obtained from calls to the service and conducted user and traveler surveys. They assessed the quantity and quality of information provided by SmarTraveler and evaluated the public acceptance and the utility of the travel information. Evaluators attempted to determine the impacts of the project on managing traffic congestion and to recommend improvements in the collection and dissemination of traffic information.

## **Results**

The system collected extensive amounts of travel information, which led to the following findings:

- Awareness of SmarTraveler among the target population was limited, but the SmarTraveler user community contained a higher portion of upper income individuals than did the target population.
- Daily callers were impressed with the SmarTraveler service. Ninety-seven percent of the respondents indicated they would use the service again.
- Daily calls increased at a steady rate but did not reach a sufficiently high level during the test period to have meaningful impacts on congestion. A significant number of daily respondents, however, reported that the information they received from SmarTraveler had a direct influence on their travel behavior. Among these influences were changing departure times, using different routes, or canceling the trip.

The Evaluators concluded that utilization of the service by the public was below the level required to make a measurable impact on traffic congestion. With an increase in use, however, potentially enough people will modify their travel behavior to reduce or mitigate congestion.

## **Legacy**

The project continues in operation as the ATIS portion of the Massachusetts ITS program. The Massachusetts Highway Department administers the program as a Federal-Aid funded program, with SmarTraveler under contract to provide the information services. The system is expanding from its early ties to telephone technology, and has expanded onto the Internet. Negotiations are underway for introduction to the regional television market.

## **Test Partners**

Federal Highway Administration

Massachusetts Highway Department

Smart Route Systems

## **References**

Multisystems, Inc., Evaluation of Phase II of the *SmarTraveler* Advanced Traveler Information System Operational Test, Final Report, July 1993.